

Listing of Claims

The following listing of claims will replace all prior versions, and listings, of claims in the subject application:

Claims 1-38 (canceled).

39. (currently amended) A bulk crystal substrate of GaN, comprising:

a slab of GaN single crystal having a substantially uniform composition of GaN in a thickness direction of said slab; said slab having a defect density lower than about $[[10^{-3} \text{ cm}^{-3}]]$ 10^3 cm^{-2} .

40. (original) A bulk crystal substrate of GaN as claimed in claim 39, wherein said slab has a thickness exceeding about 100 μm .

41. (original) A bulk crystal substrate of GaN as claimed in claim 39 wherein said slab has a thickness exceeding about 300 μm .

42. (currently amended) A bulk crystal substrate of GaN as claimed in claim 39, wherein said slab has a defect density lower than about $[[10^{-2} \text{ cm}^{-3}]]$ 10^2 cm^{-2} .

43. (original) A bulk crystal substrate of GaN as claimed in claim 39, wherein said slab is formed of GaN of a hexagonal crystal system.

44. (original) A bulk crystal substrate of GaN as claimed in claim 39, wherein said slab is formed of GaN of a cubic crystal system.

Claims 45-77 (canceled).

78. (new) The bulk crystal substrate of GaN as claimed in claim 39, wherein said slab has a thickness exceeding 10 μm .

79. (new) The bulk crystal substrate of GaN as claimed in claim 39, wherein a cathode luminescent spectrum of said slab of GaN single crystal has no more than one peak.

80. (new) A bulk crystal substrate of GaN comprising a slab of GaN single crystal having a substantially uniform composition of GaN in a thickness direction of said slab, having a defect density lower than 10^3 cm^{-2} , and having a thickness exceeding $10 \text{ }\mu\text{m}$.

81. (new) The bulk crystal substrate of GaN as claimed in claim 80, wherein said slab has a thickness exceeding $100 \text{ }\mu\text{m}$.

82. (new) The bulk crystal substrate of GaN as claimed in claim 80, wherein said slab has a defect density lower than 10^2 cm^{-2} .

83. (new) An optical semiconductor device comprising said bulk crystal substrate of GaN as claimed in claim 80.

84. (new) The optical semiconductor device of claim 83, wherein said optical semiconductor device includes a laser diode.

85. (new) The optical semiconductor device of claim 83, wherein said optical semiconductor device includes a light-emitting device.

86. (new) An electron device comprising said bulk crystal substrate of GaN as claimed in claim 80.